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CENTRAL INTELLIGENCE AGENCY  
**INFORMATION REPORT**

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COUNTRY Poland

SUBJECT Poland's Iron and Steel Industry (Part III) Supply and Production of Pig Iron/Construction of New Ovens/Re-construction of Old Installations/Blast Furnaces/Steel Production/Quality Steels/Rolled Products/Overall Picture of Six-Year Plan/By-Products

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Pig Iron

1. "If the production target for steel under the Six-Year Plan is to be achieved (i.e. 4,600 thousand tons), the supply of at least 3,500 thousand tons of pig iron is indispensable. (My information dates through early June 1954)

2. Pig iron production is on the increase, as shown by the statistics for the years 1949-1952:

1949	- 1,394 thousand tons
1950	- 1,545 thousand tons
1951	- 1,625 thousand tons
1952	- 1,995 thousand tons
1953	- 2,400 thousand tons
1954	- 3,150 thousand tons (target)

Respective statistics [ ] [ ] are somewhat different showing the following production in the same period:

1950	- 1,488 thousand tons
1951	- 1,577 thousand tons
1952	- 1,702 thousand tons
1953	- 2,500 thousand tons

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25X1

- 2 -  
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25X1

3. "It seems certain, however, that to achieve 3,510 thousand tons in 1955, the Polish iron and steel industry will be compelled to make a further additional effort, and in particular the installation of one more blast furnace (in Nowa Huta or Czestochowa) would be necessary. The opinion of British Iron and Steel Federation is that without construction of this new blast furnace the achievement of the target will be impossible. On the other hand the planners of the Communist regime see the solution for it (apart from the construction of new ovens) in the modernization of the existing, old installations. This modernization would include:

- (a) enlargement of old ovens
- (b) greater efficiency and mechanization of operations
- (c) agglomeration and sintering of ores, or their standardization and sorting.

#### Construction of new ovens

4. "The authors of the Six-Year Plan are of the opinion that big blast furnaces give a much larger production than medium and small ones. In 1949 the capacity of blast furnaces in Poland did not exceed 500 tons yearly per worker. The new big units are to put out 2500-3000 tons of pig iron yearly per worker.
5. "By increasing the size of the ovens, one reduces the amount of labor needed for their operation. An oven having 500 cubic meters of size needs about 1.50 worker/hour for one ton of pig iron; the one of 1,000 cubic meters - only one worker/hour, 1,200 cubic meters - 0.8 worker/hour. It should be added that investment outlay decreases in proportion to the larger size of the constructed ovens which reduces the costs of amortization and further influences the costs of production.
6. "It is expected that the production of big-size furnaces in Poland, which in 1952 amounted only to 8% of total production, will reach 50% of the total in 1955.

#### Reconstruction of old installations

7. "The reconstruction of old installations, as was mentioned before, is considered to be the means for achieving the final target of the Six-Year Plan.
- (a) A bigger capacity of ovens is to be obtained by a greater intensity and higher temperature of blast, through its automatization. In the old units, there are obsolete blowing installations operated by cylinders, steam or gas. Now, installations are being introduced, with a turbine or turbo-blowing electric propulsion, which will result in a considerable increase in the efficient utilization of temperatures.
  - (b) A greater efficiency of ovens will be achieved by the introduction in all ovens of mechanical devices for closing and opening furnace doors releasing the iron.
  - (c) A more efficient operation will be assured by installing nearby the furnaces the stores of ore, coke and refractory materials, which would be equipped with mechanical lifts and pouring-off devices.
  - (d) Improvement by achieving a better quality of ore and coke has been dealt with in previous chapters

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8. "Polish planners wish also to obtain a greater productive capacity of furnaces through the adoption of the so-called acid process of production, which means that one adds to the mixture only a minimum needed proportion of calcium and consequently the needed amount of coke is also reduced per ton of ore. The result is a higher indicator of produced pig iron. The weak point of this process is that too great a percentage of sulphur remains in pig iron. This excess may be eliminated up to 70% of the original content of sulphur by immersing pig iron in vats with calcinated soda.

#### Results in pig iron production

9. "The results achieved until now in pig iron production indicate that the regime is well on the way to reaching the level fixed by the plan. At the end of December 1951 - according to the information possessed by Polish centers in London - the plan for the production of pig iron was fulfilled in 83%. But at the closing of the year, this was raised to 97.3%, i.e. 1,615 thousand tons.

#### Blast furnaces

10. "The following blast furnaces are in operation in Poland at present:

		Capacity t.p.a. tons per annum
Bobrek foundry	4 blast furnaces	
Bytom	2 x 400 t.p.d. / tons per diem	480,000
	1 x 550 t.p.d.	
Fokoj foundry	Blast furnaces	
Nowy Bytom	3 x 120 t.p.d.	425,000
	1 x 180 t.p.d.	
	1 x 270 t.p.d.	
	1 x 400 t.p.d.	
	Largest built 1939, Second largest 1925.	
Kosciuszko foundry	Blast furnaces:	
Chorzow	1 x 350 t.p.d. 'A'	600,000
	1 x 600 t.p.d. 'B'	
	1 x 720 t.p.d. 'C'	
	'A' built 1937, rebuilt and enlarged 1947; 'B' completed Jan 1952, 'C' - Feb 1953	
Florian,	Blast furnace	90,000
Swietochlowice	1 x 250 t.p.d.	
Zabrze Works	Blast furnace 1 x 40 t.p.d. (before World War II four furnaces, but badly damaged during hostilities)	14,000
Bankowa Works	Blast furnaces 1 x 250 t.p.d.	90,000
Dabrowa Gornicza	(two built 1895, one rebuilt 1946)	
Katarzyna	Blast furnaces 1 x 120 t.p.d.	50,000
Soanowice	built 1935	
Nowotko Works	Blast furnace 1 x 70 t.p.d.	25,000
Ostrowiec	(built before 1929; before World War II plant had two furnaces)	
Starachowice	Blast furnace 1 x 80 t.p.d. (built 1938, reconstructed 1951)	30,000

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Stalewa Wola

1 blast furnace

Szczecin Works  
Szczecin

Blast furnaces 1 x 180 t.p.d. 155,000  
1 x 250 t.p.d.  
(Before World War II three  
furnaces, but badly damaged  
during hostilities. One  
furnace reconstructed 1946,  
second reconstructed and enlarged  
1947).

Bierut Works  
Czestochowa

1 blast furnace 270,000  
completed and blown Aug 1953.  
(second under construction)

Nova Huta

Planned: 4 x 800 t.p.d. blast  
furnaces.

#### Steel Production

11. "The Six-Year Plan for the production of steel - similarly as in pig iron production - promotes the introduction of open hearths of huge capacity from 100 to 370 tons. When the Plan is carried out - 60% of all steel will be produced by such large open hearths. An open hearth of the capacity 185-370 tons has been accepted as typical for new constructions. Here, the Polish planners are working upon Soviet models. The ensuing economizing will amount to:

- 10% in the number of working hours
- 20-25% in the costs of refractory bricks, fuel, amortization etc.

12. "The Polish steel production concentrates exclusively on the models of open hearths (Marten ovens) and of electric ovens for the production of special steels. The Six-Year Plan stipulates that in 1955 all steel-work ovens will give a production higher by 50% than in 1949. This is to be obtained by the following methods:

- (a) Some of the newly constructed open hearths are to be mechanized, adapted for tilting, which makes production more efficient. The principle of big open hearths has been adopted (as in above remarks).
- (b) The heating technique is being modernized. To achieve a greater intensity in heating and in melting process, and a free regulation of temperatures, a mixed coke blast furnace gas is being introduced, with the value in calories higher than those which have been used until now. This will increase the productiveness of the ovens by 10-15%. Waste gases are to be utilized for the production of steam, in special boilers. This will give a great saving in heat energy which until now has been wasted.
- (c) Sucking devices are introduced to replace the natural draught of air; this will raise the heat effectivity and regulation of temperatures.

The investments described under (b) and (c) are to reduce the expense of heat energy by 20-25%.

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25X1

25X1

- 5 -  
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25X1

13. "Further plans provide for the introduction of an appropriate surveying and controlling apparatus, functioning automatically, which would enable the controlling of mixing processes of the components of steel and of other physical-chemical processes connected with the production of steel. This automatization should bring the following results:

- (a) reduction in the expense of fuel by 10-20%
- (b) reduction in the expense of refractory bricks by 5-10%
- (c) increase in the output of the oven by 8-12%.

It also prolongs the period of service of the oven by 10-15%.

14. "The last innovation for the modernization of production is that all steel works possessing blast furnaces are to be equipped with mixing containers with a large capacity. These are equalizing cisterns, between a blast furnace and the steel works. They receive pig iron released from blast furnaces which the steel works cannot yet receive. Pig iron which has passed through such a mixing container is allegedly improved.

#### Quality steels

15. "The Six-Year Plan puts a great emphasis on the production of quality steels, suitable for the requirements of machine and turning lathe industry as well as of the production of steel constructions.
16. "The quality of produced steel is to be raised by modern processes tested in the USSR, which aim at the reduction of the content of sulphur and phosphorus, and of other non-mechanical elements in the steel. De-sulphurizing and de-oxygenizing is to be carried out by means of synthetic dross.
17. "Apart from the raising of the quality of steel, it is proposed to switch over to the production of low alloy steels which are lighter and more suitable for constructions (saving 25-35% in weight) and also better resistant to corrosion and lasting 50-100% longer.
18. "Searching for special quality, alloy steels, the Plan provides for the construction of a foundry of quality steels in Miednoy near Warsaw which is to produce cutting rustless steel resistant to acid.
19. "Polish steel works are to work with pig iron in 75%, reducing the use of scrap, reserves of which are running very low. In the years 1949-1952, the use of scrap was much higher. In 1952, Polish steel industry used 1,600 thousand tons of scrap, including around 500 thousand tons of circulating scrap.
20. "The elements in hand allow for the following estimation of steel production in Poland:

- (a) Statistics according to the Polish circles in London:

<u>Year</u>	<u>Pig Iron</u> (in thousands of tons)	<u>Steel</u> (in thousands of tons)	<u>Roller products</u>
1949	1394	2300	1549
1950	1546	2501	1767
1951	1685	2784	2020
1952	1995	3455 (plan)	2220
1953	2400	3610 (plan)	2500
1954	3120	3970 (plan)	2750
1955	3510	4560 (plan)	3100

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25X1

- 6 -  
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25X1

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(b)

1950	1488	2525	1645
1951	1577	2792	1859
1952	1782	3180	2045
1953 (plan)	3500	4500	3200

- (c) Bierut, in his report presented to the Second Congress of Polish Communist Party, gave the figures of steel production as 2,300 thousand tons in 1949, 3,604 thousand tons in 1953.

25X1

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delays still appear in the Polish steel production. Some fragmentary reports state e.g. that the plan for December 1951 was executed only in 82%. Throughout the whole year 1951, 2,661,700 tons of steel, i.e. 98.7% of the plan, were allegedly produced; this however, does not change the essential position.

22. "The shortcomings in production are caused by the difficulties in the internal deliveries of coal and coke, lack of alloys, etc. Another cause is the bad service of the ovens and inexpert maintenance, lack of technical instruction; the fluctuation of labor in steel works in 1952 was still up to 30%. The same sources give the times of production stoppages in individual works during 11 months of 1951. (The report is dated March 1952.)

<u>Name of the steel works</u>	<u>Number of open hearths</u>	<u>Hours of stoppage</u>
Mala Panew	1	83
Czestochowa	3	229
Baildon	1	56
Ostrowiec	5	427
Zawiaz	5	455
Zygmont	4	483
Bobrek	8	744
Batory	2	119
Ferrus	3	201
Florian	6	500
Jednost	2	242
Bankowa	6	543
Kosciuska	7	575
Stalin	3	312
Pokoj	7	587
1 Maja	3	157

In all, 78 open hearths and 17 electric steel ovens were functioning in Poland towards the end of 1951.

23. "At the end of 1953, the following steel-producing plants were actually in operation or in the stage of preparation of construction:

<u>Plant</u>	<u>Equipment</u>	<u>Capacity</u>	<u>Remarks</u>
Bobrek, Bytom	8 open hearths		working on hot metal practice
Pokoj, Nowy Bytom	8 open hearths 1 electric furnace		including one 60 t. and one 100 t. tilting furnace

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25X1

25X1

- 7 -

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25X1

Kosciuszko, Chorzow	6 open hearths incl. 2 x 50 t. (fixed) 1 x 160 t. (tilting) 1 x 300 t. (tilting)	hot metal practice
Florian Swietochlowice	6 open hearths	
Jednosie Siemianowice	open hearth shop (in 1951 - two)	new open hearth (or hearths) built 1950-52
Stalin Works near Gliwice (Labedy)	Open hearth shop (according to a report of 27.10. 1953 - number- ing 12 o.h.)	Plant completely dis- mantled by Soviets; re-installation of open hearths gradual (three in 1951, three in 1952)
Batory Chorzow	4 open hearths 3 small electric arc furnaces	
Ballidon Katowice	Open hearth shop (in 1951 - one) Electric steel furnaces	produces high speed steels. A new one - of East German make - installed in April 1953
Gliwice	Open hearth shop (no more than 3)	Seriously damaged during World War II
Ferrus Katowice	Open hearth shop (in 1951 - three)	
Bankowa, Dabrowa Gornicza	Open hearth shop incl. 4 x 50 t. (in 1951 - six)	Built 1912, rebuilt 1925, again recon- structed as Terni furnaces 1931. Capacity 200,000 t.p.a. [tons per annum]
Katarynna Sosnowiec	Open hearth shop	capacity 60,000 t.p.a.
Zawiercie	Open hearth shop (in 1951 - five)	All open hearths being systematically rebuilt
Sosnowiec	Open hearth shop	
Nowotko, Ostrowiec	Open hearth shop (in 1951 - five)	A new open hearth (or hearths) added 1950-52
Stalowa Katowice	Open hearth shop Electric arc furnaces: 2 x 5 t.	heat and acid re- sisting steels produced

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25X1

- 8 -

25X1

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stalowa Wola Open hearth shops

Mala Palow 2 open hearths special steels damaged during World War II

Warsaw Small electric arc furnace

Bi Bierut, Czestochowa Open hearths (Polish) Capacity 360,000 t.p.a. reports state six, First put into operation June British statistics, 1951 (five)

Nowa Huta 10 open hearths (of Planned capacity 1.5 mil. t.p.a. 185 and 370 t.)

Mlociny near Warsaw [see paragraph 18]

Rolled Products

24. "According to the Six-Year Plan, 3,200 thousand tons of rolled products are to be obtained in 1955.

25X1 25. [redacted] the statistics of production and plans in this branch are as follows:

Year 1949	- 1549 thousand tons
1950	- 1767 thousand tons
1951	- 2020 thousand tons
1952	- 2220 thousand tons
1953	- 2500 thousand tons (plan)
1954	- 2750 thousand tons (plan)
1955	- 3200 thousand tons (plan)

25X1 26. [redacted]

	Production (in thousands of tons)	Target
--	--------------------------------------	--------

1949	1443	1300
1950	1645	
1951	1859	
1952	2045	
1955		3200

25X1 27. [redacted] delays occurred in the fulfillment of the plan in 1951 and 1952. In 1951 only 1,848,900 tons of rolled products were obtained, i.e. 96.4% of the plan. The state of production allegedly improved in 1952 and 1953, but no definite information is available.

28. "The Three-Year Plan achieved the reconstruction of most of the pre-World War II rolling works. The result was that production was restored almost to the pre-World War II level, with the average production of the rolling plants around 180 thousand tons.

29. "The Six-Year Plan aims at raising the production capacity of rolling plants to 400 thousand tons, and provides for the installation of rolling works with a production capacity of one million in Nowa Huta and in Bierut Works, Czestochowa.

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25X1

- 9 -  
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25X1

30. "Regarding modernization of the existing rolling plants, the Polish planners intend to increase the weight of poured steel for the blooming mills, as it simplifies and facilitates the work of the plant considerably and is necessary in new big steel works and rolling plants. Both Plans therefore provided for the installation of huge blooming mills; in such mills the production scheme is different from the former ones, has several grades, which gives a better quality product, and raises the speed of the process. The principle of the construction of new rolling plants is continuity: several forms are working at the same time through the sequence of rolling processes, from the poured-in steel to a finished product.
31. "A strong emphasis was laid on the production of thick and thin sheet steel. In the existing, old rolling plants, the worker's productive efficiency comes up to 140 tons per year. In the huge automatized blooming plant installed in Huta Bobrek Works, this will be raised to 3,500 tons per year. The speed of rolling in this plant amounts up to 25 meters per second. This is made possible, i.e., by a very high degree of automatization of the traction. The reconstruction of existing rolling plants is to increase their production by 100%.
32. "The most essential element in modernization is that steam energy (in 1949 - operating 25% of rolling plants) is to be replaced by electric power; towards the end of the Six-Year Plan it is to disappear completely from the rolling works (in 1955 - only 1.2% will remain). In electric power mercury apparatus (Prostownik) is used for continuous current.
33. "In the production of tubes it is planned to modernize the production and introduce new branches, e.g. of high-pressure boilers, machine tubes, axles from thick-wall tubes and the tubes welded with electricity.
34. "The following plants are equipped with rolling installations:

Bobrek	Rolling equipment incl. a new blooming mill	Capacity: Blooming mill 250-300,000 installed t.p.a. /tons Sept. 1952. per annum/
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Bobrek's new blooming mill has a production output 2½ times larger than the biggest blooming mill previously existing in Poland; is centrally controlled and fully automatized, operated by a crew of 15.

Pokoń, Nowy Bytom	Rolling equipment: Blooming Mill, three-high sheet mill, Section mill, Tube mill	All pre-World War II
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Kosciuszko Chorzow	Rolling equipment: Blooming Mill, Heavy Section Mill, Medium and light Mill, Morgan Mill
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Moran Swietochlowice	Rolling equipment: Medium and light section mills, Cold reduction mill, Equip- ment for small seamless tubes, Tinning facilities
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25X1

- 10 -

25X1

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Jednostka Siemianowice	Rolling equipment: Section mill, Plate and sheet mills, Seamless and welded tube facilities	
Stalin Works Lubdy	Rolling equipment: Blooming mill, Univer- sal mill (1948), Sheet mill, Pressing equip- ment	
Batory, Chorzow	Rolling equipment: Heavy, medium and light section mills, Heavy and medium plate and sheet mill, Seamless tubes.	
Baldon, Katowice	Rolling equipment: Plate and sheet mills, Bar mill, Wire drawing, Seamless tubes	
Gliwice Works	Rolling mills	
Rybnik Works	Sheet mills	
Bankowa Dabrowa Gornicza	Rolling equipment: Blooming mill, Two section mills, Sheet mills	Capacity two-sec. mills- 50,000 t.p.a.
Kutarszyna Sosnowiec	Rolling equipment: Sheet mill tubes	20,000 tpa 7,000 t.p.a.
Zawiercie Works	Rolling equipment	
Milowice Works	Pressing equipment	
Sosnowiec Works	Rolling equipment: Roughing Mills, Seamless tubes (Wellmann), Butt welded tubes, Cold draw- ing plant, Malleable iron foundry	
Renard Works Sosnowiec	Rolling equipment	Wire rod, and wire Produced gun bar- rels from 1941 until end of World War II
Staszic Works Sosnowiec		Wire drawing only
Nowotko Works Ostrowiec	Rolling equipment	

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25X1

- 11 -  
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25X1

25X1

Starachowice	Rolling equipment	
Stalowa Wola	Rolling equipment: Section mill	
Andrzej (L. Silesia)	Rolling equipment	
Mala Panew	Rolling equipment	
Bierut Works Czestochowa	Rolling equipment: Roughing mill Tube mill More rolling equip- ment(including tube mill) planned.	
Nowa Huta	Rolling equipment: Blooming mill, Section and structural mill, Plate mill, Sheet mill.	Planned capacity 1 mil. t.p.a.

Overall Picture

35. "The present state of Polish steel and iron industry and of the investments provided for under the Six-Year Plan is as follows:

	<u>Equipment</u>	<u>Capacity</u>	<u>Remarks</u>
Bobrek Works Bytom	3 batteries of coke ovens	t.p.a. [tons per annum]	
	Greenawalt sinter plant	240,000	Pre-World War II
	Blast furnaces: 2 x 400 t.p.d.) 1 x 550 t.p.d.)	480,000	Three put. in operation July 1951 one more later (now four). In 1942 plant had five.
	Open hearth shop (8 ovens)		Working on hot metal practice
	Rolling equipment including new bloom- ing mill	250,000 300,000	Built by Stalin Works, Novo-Kramatorsk, and Elektrosila Works Leningrad. Installed Sept 1952, biggest in Poland
- - - - -			
Pokoj Nowy Bytom	Coke ovens		One old battery dis- mantled after World War II.
	Blast furnaces: 3 x 120 t.p.d.) 1 x 180 t.p.d.) 1 x 270 t.p.d.) 1 x 400 t.p.d.)	425,000	Largest built 1939, second largest 1925.

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- 12 -  
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8 open hearths

including one 60 T,  
and one 100 T. tilt-  
ing furnace

One electric furnace  
Rolling equipment:  
Blooming mill  
Three-high sheet mill  
Section mills  
Tube mill

all pre-World War II  
modernized middle 1953

Plant originally built  
1840

Zabrze Works  
Zabrze

Blast furnace 14,000  
1 x 40 t.p.d.  
Foundry

Four blast furnaces  
before World War II,  
but plant heavily  
damaged during  
hostilities

Kosciuszko

Two batteries of  
coke ovens

Completed Feb and May  
52, third under con-  
struction

Blast furnaces: 600,000  
1 x 350 t.p.d.  
'A'  
1 x 600 t.p.d.  
1 x 720 t.p.d. 'C'  
Open hearth shop

built 1937, rebuilt  
and enlarged 1947  
completed Jan 1952  
completed Feb 1953

including  
2 x 50 T. (fixed)  
1 x 160 T. (tilting)  
1 x 300 T. (tilting)  
(six in all)

using hot metal practice

Rolling equipment:  
Blooming mill  
Heavy section mill  
Medium and light mill  
Morgan mill  
Foundry

Modernization in 1953

Plant originally  
established in 1802

Florian  
Swietochlowice

Coking ovens  
Blast furnace 90,000  
1 x 250 t.p.d.  
6 open hearths  
Rolling equipment:  
Medium and light  
section mills  
Cold reduction  
mill  
Equipment for small  
seamless tubes  
Tinning facilities  
Foundry

built 1929, rebuilt  
1948

25X1

- 13 -  
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Jednosc  
Semianowice

Open hearth shop  
Rolling equipment:  
Section mill  
Plate and sheet  
mills  
Seamless and welded  
tube facilities

In 1951 there were two;  
new hearth (or hearths)  
added 1950-52.  
In 20's and 30's this  
plant operated blast  
furnaces.

Stalin Works  
Lubed near  
Gliwice

Open hearth shop  
  
Electric steel furnaces  
Rolling equipment:  
Blooming mill  
Universal mill (1948)  
Sheet mill  
Pressing equipment

according to report of  
10/27/1952 - 12 o.h.

Before World War II,  
good modern rolling  
equipment. Plant  
badly damaged by  
Soviet troops, and a  
heavy and medium sec-  
tion mills removed to  
USSR as reparations.

Batory  
Chorzow

Open hearth shop (four)  
Three small electric arc  
furnaces  
Rolling equipment:  
Heavy, medium and light  
section mills  
Heavy and medium plate  
and sheet mill  
Seamless tubes  
Foundry

Baidon  
Katowice

Open hearth shop (one in 1951)  
  
Electric steel furnaces  
  
Rolling equipment:  
Plate and sheet mills  
Bar mill  
Wire drawing  
Seamless tubes

Produces high speed  
steels

One new of East German  
make installed April  
1953

Gliwice Works

Open hearth shop  
Rolling mills  
Steel foundry

no more than three  
Serious World War II  
damage to plant

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25X1

- 14 -

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Rybnik Works	Sheet mills	Always specialized in sheet production
-----		
Ferrum Katowice	Open hearth shop	In 1951 - three
-----		
Zgoda Works	Small furnaces	mainly engineering
-----		
Zygmunt Works	Coke ovens	new ovens under construction after old ones dismantled after World War II
-----		
Milowice Works Sosnowiec	Forge Pressing equipment	Established 1883 as steel works, the open hearth shop ceased operating 1931, works abandoned; re-opened under German occupation.
-----		
Bankowa Works Dabrowa Gornicza	Blast furnaces: 1 x 250 T.p.d. 90,000 Open hearth shop 200,000 including 4 x 50 T. (six in 1951 in all)  Rolling equipment: Bloomer mill Two section mills 50,000 Sheet mills Iron foundry Drop forging	Two furnaces built 1895, one rebuilt 1946 Built 1912, rebuilt 1925, reconstructed as Terni furnaces 1931.      Plant originally built in 1834
-----		
Katarzyna Sosnowiec	Blast furnaces: 1 x 120 T.p.d. 50,000 Open hearth shop 60,000 Rolling equipment: Sheet mill 20,000 Tubes 7,000 Foundry Machine shop	built in 1935      including production of brews. Plant originally built in 1882.
-----		
Zawiercie Works	Open hearth shop Rolling equipment	in 1951 - five o.h. Before World War II one small blast furnace

25X1

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- 15 -  
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## Sosnowiec Works

Open hearth shop  
Rolling equipment:  
Roughing mills  
Seamless tubes (Wellmann)  
Butt welded tubes  
Cold drawing plant  
Malleable iron foundry

Plant originally built  
1881, main producer  
of tube steel in  
Poland.

Renard Works  
Sosnowiec

Rolling equipment  
Forge  
Press

wire rod, wire pro-  
ducts; from 1941 till  
end of World War II  
produced also gun  
barrels.

Staszic  
Sosnowiec

wire drawing only

## Nowotko Ostrowiec

Blast furnace 1 x 70 tpd 25,000  
Open hearth shop  
Rolling equipment  
Forge  
Iron and Steel foundry  
Engineering dept.

before World War II  
- two. In 1951 -  
five; new hearths added  
1950-52.

## Starachowice

Blast furnace 1 x 80 Tpd. 30,000  
Open hearth shop  
Electric arc furnaces  
2 x 5 T.  
One Induction furnace (1 ton)  
Rolling equipment  
Foundry  
Forge  
Pressing equipment

built 1938, reconstruc-  
ted 1951  
Heat and acid resisting  
steels produced

Plant suffered World  
War II damage

## Stalowa Wola

1 blast furnace  
Open hearth shops  
Rolling equipment:  
Section mill  
Foundry  
Forge  
Pressing equipment

special steels pro-  
duced. Before World  
War II plant most  
modern in Poland.

## Andrzej

Rolling equipment

Established 1834

Mala Panew  
nr. Opole

Open hearth shop (two)  
Rolling equipment

Producing special  
steels. Plant suffered  
World War II damage

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- 16 -

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## Laura Works

two blast furnaces  
Four open hearths  
Rolling equipment:  
Tube mill

modernized 1952  
Italian equipment,  
installed 1951

- - - - -

Stoleczyn Works  
Szczecin

Coke ovens  
2 blast furnaces:  
1 x 180 T.p.d. 155,000  
1 x 250 T.p.d.  
Iron foundry

Reconstructed 1947  
Before World War II,  
3 furnaces but plant  
seriously damaged  
First furnace rebuilt  
1946, second enlarged  
- 1947

- - - - -

## Warsaw Works

Small electric arc furnace  
Steel foundry

- - - - -

Bierut Works  
Czestochowa

1 blast furnace 270,000  
Open hearth shop  
Rolling equipment:  
Roughing mill  
Tube mill

Completed, blown Aug  
1953. Polish reports  
state six, British  
statistics five. All  
built after 1949.  
Put into operation Oct  
1951. Put in operation  
April 1952.

Planned: Sinter Plant; coke ovens; blast furnaces  
(second under construction with capacity 700-750 t.p.d.,  
two more to be built later); Further open hearth furnace;  
Rolling equipment to include a tube mill. Plant built  
adjacent old Bandtke Works. Final capacity figure is  
to be 1,100,000 tons of steel per year.

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Nowa Huta  
near Krakow

Planned:  
Sinter plant  
Coke ovens  
4 x 800 T.p.d. blast furnaces  
10 open hearths (of 185 & 370 T.) 1.5 million tons  
Rolling equipment:  
Blooming mill  
Section and structural mill } 1 million tons  
Plate mill  
Sheet mill }  
Fire brick factory  
Foundry  
The works will probably also have tube making equipment  
and tinning facilities.

Planned capacity:

- - - - -

Mlociny near  
Warsaw

Planned: production of speed, rustless, acid-resisting  
steel. Construction started in spring 1953.

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- 17 -  
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By-Products

36. "The Six-Year Plan provides for the utilization of slag left over from the production of blast furnaces. Until now this blast-furnace slag was only used in a limited quantity, to be granulated and made into bricks. The great heaps of slag (Haldy) which for decades had been amassing on large terrains around the iron works, became a real problem in some localities in Silesia.
37. "The Six-Year Plan aims at a complete liquidation of this problem. Blast furnace slag is to be used in three different ways:
- (a) A part of it - to be granulated and made into portland cement,
  - (b) a part made into pumice and used as insulation material,
  - (c) a part to be cast into cubic bricks or broken up and used for the construction of roads.
38. "Some of the ores used by Polish industry, contain vanadium. This content may be almost totally transferred into slag and then separated from it. Special installations for separating vanadium from slag are to be constructed.
39. "Other installations are to separate copper from pyrite slag. De-copperized remnants will afterwards be transformed into raw material by a furnace process.
40. "A large factory, for the production of cement from blast-furnace slag and of semi-products for construction is to be established in the framework of Nowa Huta combine.
41. "Of other plants which will be engaged in the processing of blast furnace slag, the Six-Year Plan provides for establishing a plant for the production of cement in Warsaw, the construction of which was begun in Oct 52, in the area of the future river harbor in Zeran. This plant will base a part of its cement production on blast furnace slag.
42. "The factory for insulating plates in Katowice put in operation in 1952, produces 'steel wool' (insulation material from high-furnace slag)."

- end -

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